

Behavioral interventions for children with fetal alcohol spectrum disorders: A review of systematic reviews



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- **Conflicts of Interest:** No conflicts of interest to disclose

Background

- Systematic reviews of FASD interventions
- **Rationale: Identify best intervention practices for children with complex behaviors.**

Definitions and Eligibility

Behavioral Interventions: Defined as practices that enhance positive behaviors or reduce maladaptive behaviors



Intervention Review Inclusion Criteria:

- Child-Centered (0-18 years, or a child with a caregiver)
- Outside of a school (e.g., clinics, home-based, community)
- Non-pharmacological: Therapies not using medication

Results: 7 Systematic Reviews

Scarcity of behavioral intervention studies

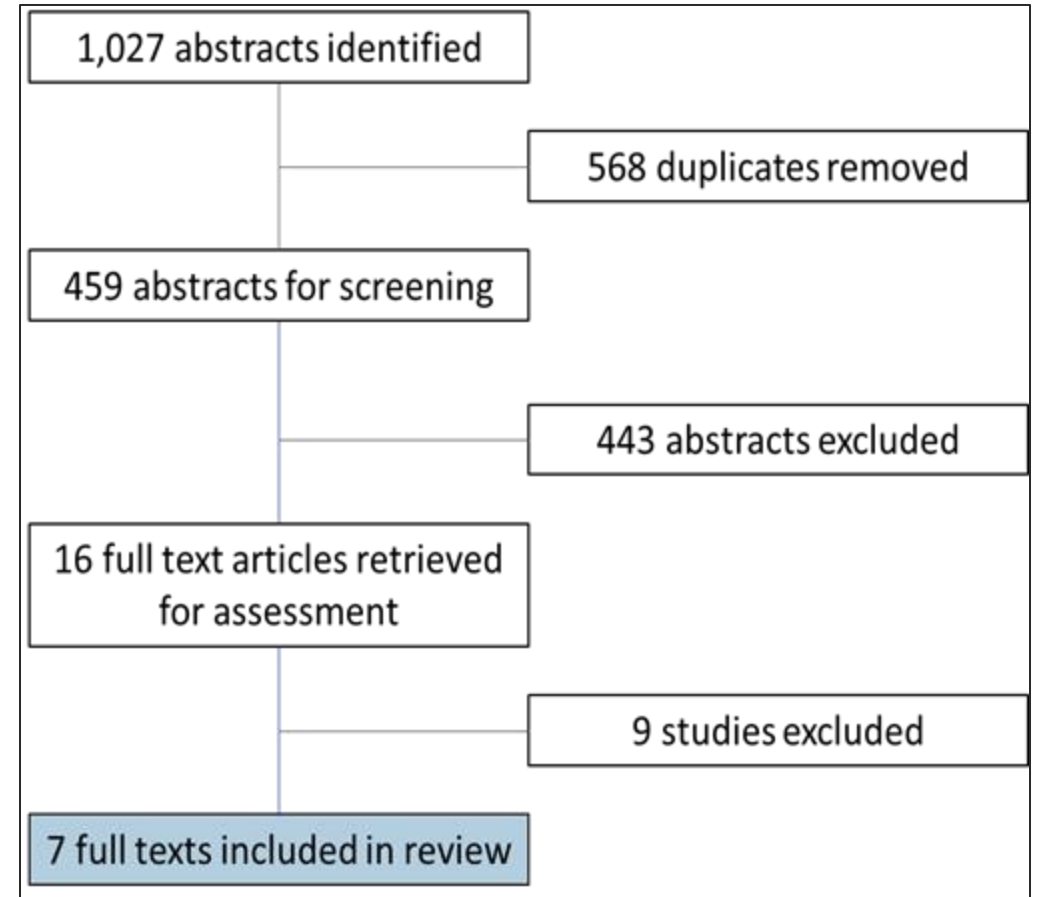
- **Overlap:** 9 interventions repeatedly included across reviews

Critical Appraisal: Review Quality

- 2 High, 2 Low, 3 Critically Low

Intervention characteristics

- Location: United States, Canada, Australia
- Diagnoses: FAS, pFAS, ARND, ND-PAE
- Ages: 3 -12 years



Results Overview

Intervention

- Randomized Controlled Trials
- Non-Randomized Studies of Interventions
- Controlled Clinical Trials
- Single-Case Experimental Studies

Settings

- Clinical Settings
- Home Settings
- Community Centers
- Therapeutic Settings

Primary Outcomes

- Language-Speech
- Attention
- Memory Skills
- Social Skills

Results Overview

Categories of Behavioral Interventions

Executive Functioning Interventions – 6 Reviews

Self-Management Interventions – 2 Reviews

Social Skill Interventions – 5 Reviews

Parent-Child dyad & Family-focused Child-centered Interventions – 5 Reviews

Behavior Regulation Interventions – 5 Reviews

Applied-Behavioral Analysis-Based – 1 Review

Results: Intervention Categories

Executive Functioning Interventions (6 Reviews)

- ALERT Intervention, Neurocognitive Habilitation Therapy
- Minor improvements of executive functioning, emotional regulation, social problem-solving
- Meta-analysis found lack of statistical significance

Self-Management Interventions (2 Reviews)

- Single-case experimental studies
- Reduction in prevalence and intensity of behavioral issues
- High risk of sampling bias

Results: Intervention Categories

Social Skill Interventions (5 Reviews)

- Children's Friendship Training
- Improvements in social interaction, parents reported improvements
- High risk of bias and lack of statistical significance

Parent-child dyad & Family-focused child-centered interventions (5 Reviews)

- Families on Track; Parents Under Pressure
- Mixed results – Enhanced caregiver knowledge and family functioning
- Diminishing long-term returns, concerns of statistical significance

Results: Intervention Categories

Behavioral Regulation Interventions (5 Reviews)

- GoFAR
- Benefits in attention and adaptive functioning
- Lack of statistical significance

Applied-behavioral Analysis-based (1 Review)

- One-to-one case study
- Significant behavioral improvements, including communication and adaptive behavior
- “weak” study design rating

Top Behavioral Interventions

Alert Program for Self-Regulation

- Manualized intervention for self-regulation using a car engine analogy
- Improvements: emotional regulation; reductions in externalizing behaviors

Neurocognitive Habilitation Program

- Adaptation of Alert Program, psychoeducation, and TBI-related strategies
- Improvements: emotional regulation; social-problem solving

Children's Friendship Training

- Group training to improve social skills and reduce problem behaviors
- Improvements: social skills knowledge; reduced problem behaviors

INTERVENTION / THERAPY

Discussion Overview

FASD Child-Centered Treatments Shows Promising Improvements in Individuals with FASD

Foundations of success identified among reviews.

- Long-term interventions
- Child-caregiver engagement

Shortcomings prevalent among the collected reviews and studies

- Issues of statistical strength
- Potentials of bias
- Questions of accessibility to the general population

Discussion

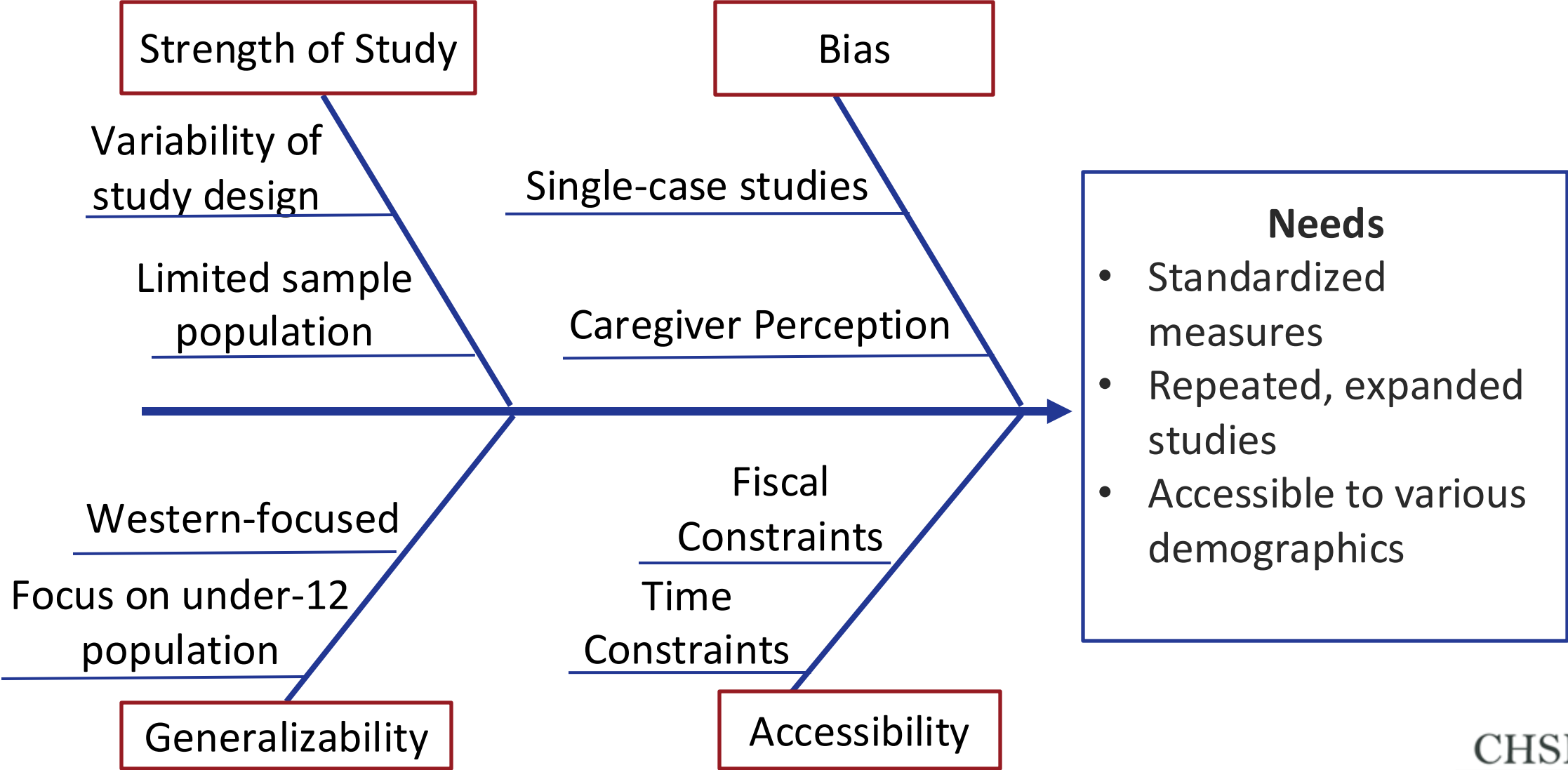
Strengths

- Child-centered interventions demonstrate positive impacts
 - Executive functioning, social skills
- Reinforcement of regular, structured interventions
- Potential for long-term developmental gains

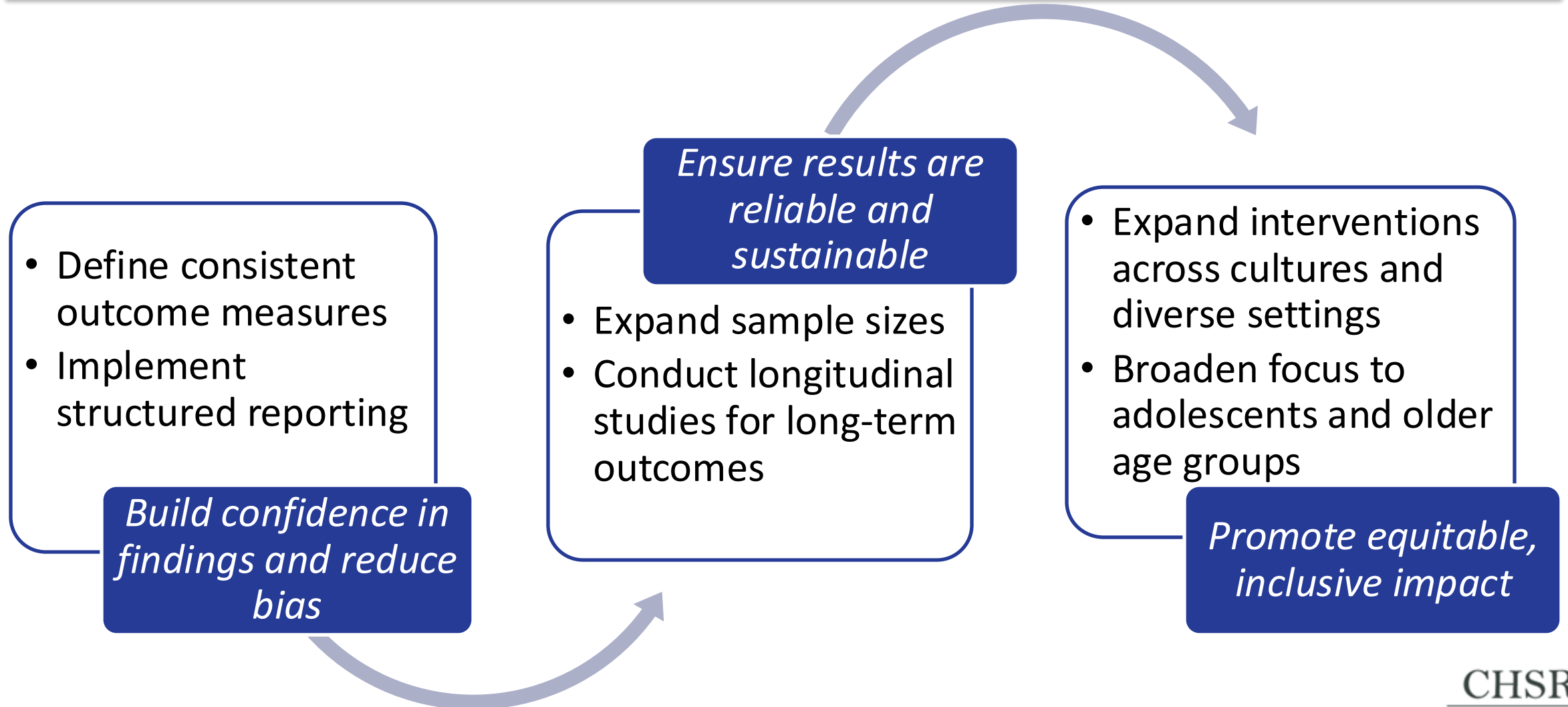
Opportunities

- Integration of child into interventions
- Continue length of interventions to build upon foundations

Discussion



Future Next Steps



Strengths & Limitations

Strengths

- Comprehensive synthesis of reviews identifies overarching themes, strategies, and gaps of knowledge
- AMSTAR-2 allowed proper appraisal and assessment of systematic reviews, ensuring transparency of conclusions

Limitations

- Differing measures of study size, intervention methods, and outcomes introduce bias
- Mixed quality of systematic reviews

Systems of Care

Parent Training

- Therapeutic Parenting
- Improve Understanding of Brain-Base Disorders
- Family Focused Care

Community Care

- Care Coordination
- Holistic Wrap Around Services

Direct Child Therapy

- Educational Support
- Maladaptive Behavior- Self Regulation
- Skill Acquisition - Executive Functioning
- Medication Management – Monitor Outcomes

Conclusion

Children with FASD can thrive when supported through structured, child-centered interventions

Review of 20 years of reviews highlights interventional improvements



Emotional Domain



Cognitive Domain



Social Domain

Need for continued research and implementation of interventions to validate effectiveness.

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Questions

For additional comments or feedback, please contact us:

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